

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: Nevada Department of Corrections (NDOC)
P.O. Box 7011
Carson City, NV 89702

Permit Number: NEV80002

Location: Southern Nevada Correctional Center & Jean Conservation Camp
#2 Prison Rd., Jean, NV 89019 (Clark County)
Latitude: 35° 46' 9"N, Longitude: 115° 19' 22"W
Township 25S, Range 59E, SW ¼ Section 13

General: The Nevada Department of Corrections operates Southern Nevada Correctional Center (SNCC), a medium-security men's prison (design capacity, 600 inmates), and Jean Conservation Camp (JCC), a minimum-security women's conservation camp (design capacity, 250 inmates), which are co-located due east of the Jean Airport. In September 2000, SNCC was closed and the 660 inmates were transferred to the High Desert State Prison in Indian Springs. SNCC re-opened in September 2006. The total population at both of the Jean facilities was 905 inmates in March 2007.

The original wastewater treatment system consisted of two asphalt-lined facultative ponds, built in 1973 (ponds 1 & 2). Ponds 3 & 4, also asphalt lined, were added in 1986. No aeration devices were used. Ponds 1-3 were rectangular-shaped and occupied an area of 1.3 acres per pond (i.e., 182 ft. × 315 ft., ea.). Pond 4 was triangular-shaped and was approximately 0.9 acres. The ponds had 6:1 side slopes and a maximum depth of 7 ft. (bottom of pond to top of berm). WTS 5, *Guidance Document for Design of Wastewater Treatment Ponds*, specifies minimum freeboards of 3 feet and 2 feet for ponds > 1 acre and ≤ 1 acre in size, respectively. Each facultative pond was designed to discharge to its own rapid infiltration basin (RIB). RIB's 1-4 covered an area of 1.5 acres per RIB (i.e., 445 ft. × 148 ft., each). Phase I and Phase II modifications were approved by the Technical Services Branch of the Bureau of Water Pollution Control on April 2, 2004 and September 26, 2005 respectively. These modifications involved the enlarging (ponds 1-3 from 1.3 acres to 1.76 acres; pond 4 from 0.9 acres to 1.3 acres) the deepening (to 9 feet) and lining (60-mil High Density Polyethylene (HDPE)) of the treatment ponds (ponds 1 & 2: Phase I; ponds 3 & 4: Phase II). The Phase I and Phase II modifications were completed in May 2006. This increased the operation capacity of the facility from 0.065 million gallons per day (MGD) to 0.144 MGD. Mechanical aeration devices are to be installed in ponds 1 & 3 no later than October 31, 2009.

Flow: According to the last submitted DMR (1st quarter 2007), the average daily influent flow was reported to be 0.120 MGD (30-day average). Based on the inmate population, this value represents approximately 133 gallon per capita per day. This usage is in line with other prison facilities in the State.

Pond Performance: The ponds are presently sampled on a quarterly basis. For the period March 2005 to March 2007, the following TSS / CBOD average values were reported for the effluent discharge: 182 mg/L (range 79. mg/L to 384 mg/L) / 38 mg/L (range 23 mg/L to 85 mg/L). The permit limits the effluent TSS to 90 mg/L. The latest effluent TSS sample (February 2007) measured 79 mg/L. This sample was taken after the completion of Phase I and Phase II modifications.

Receiving Water Characteristics: The receiving water for effluent is the groundwater of the State via percolation in RIB's 1-4. The depth to groundwater in Jean has been reported to be 365 ft. bgs (Well Log # 4294). The nearest domestic drinking water well is located 1,800 feet upgradient of the ponds/RIB's and is operated by the Las Vegas Valley Water District. This well supplies potable water to the facility. Based on the depth to groundwater and the upgradient distance to the supply well, groundwater monitoring wells are not required at this time.

Proposed Effluent Limitations and Special Conditions:

Table 1: Plant Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD (Influent)	0.144	0.216	Continuous	Flow Meter
CBOD, mg/L (Influent)	Monitor & Report		Quarterly	Discrete
CBOD, mg/L (Effluent)	-----	45	Quarterly	Discrete
TSS, mg/L (Influent)	Monitor & Report		Quarterly	Discrete
TSS, mg/L (Effluent)	90		Quarterly	Discrete
pH, Standard. Units (Effluent)	Between 6.0 & 9.0		Quarterly	Discrete
Inmate Population	Report		Quarterly	Population Count

Notes: Influent flow is defined as the wastewater flow into the headworks Parshall flume and flow meter but prior to discharge to treatment ponds.

Effluent flow is defined as the discharge from ponds prior to percolation in RIB's.

Schedule of Compliance: The Permittee shall submit the following items to the Division for review and approval:

- Within thirty (30) days of the permit issuance date (**Month XX, 2007**), the Permittee shall submit a revised Operations & Maintenance (O&M) Manual, wet stamped by a Nevada licensed Professional Engineer, for the wastewater treatment facility.
- By October 31, 2009 the Permittee shall complete the installation of mechanical aeration devices in treatment ponds 1 & 3.

Rationale for Permit Requirements: The Division's rationale for the proposed monitoring conditions is as follows:

- *Flow:* Flow is tracked to ensure that the design capacity of the treatment facility is not exceeded.

- *CBOD*: The Division requires the monitoring of influent and effluent Carbonaceous Biochemical Oxygen Demand (CBOD or Inhibited BOD), as an indication of secondary-treatment performance in the ponds. The Division's secondary-treatment CBOD standard for ponds is 45 mg/L for the daily maximum value.
- *TSS*: The Division's secondary-treatment standard for Total Suspended Solids (TSS) in pond system effluent is 90 mg/L.
- *pH*: The Division requires the pond effluent to meet a pH limitation of between 6.0 and 9.0 standard units.

Procedures for Public Comment: The notice of the Division's intent to issue (renew) a permit authorizing the facility to discharge facultative pond effluent to groundwater of the State via RIB percolation, subject to the conditions contained within the permit is being sent to the **Las Vegas Review-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all written comments are to be postmarked (via mail) or transmitted to the Division via fax or e-mail is **August 15, 2007 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue (renew) the proposed groundwater discharge permit for a period of five (5) years.

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Bureau of Water Pollution Control

Revised: July 11, 2007

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